

ETV Pilot for Indoor Air Products

Meeting Summary for the Task Force on Commercial Furniture Washington, DC, June 18, 1997

This was the second meeting of the Task Force on Office Furniture. The meeting was held in Washington DC on June 18, 1997. The purpose of the meeting was to address issues related to the furniture testing protocol.

Items Agreed Upon for Protocol

1. Categories for furniture
 - a. The BIFMA International categories in Attachment C for reporting statistics of the industry were agreed upon. These are:
 - Seating
 - Desks
 - Storage
 - Files
 - Tables
 - Systems
 - Other.
 - b. A classification of furniture based of materials of construction following BIFMA's statistical reporting procedures were agreed upon. These are:
 - Wood
 - Metal.
2. Components of a Standard Workstation

It was acknowledged that actual procurements would likely deviate somewhat from the standard workstation; but from an emissions standpoint, this would be a minor consideration. These include:

 - Five finished fabric Panels - 36" (+/- 2") by 65" (+/- 5")
 - Two work surfaces - 24" by 36"
 - One overhead storage bin with door - 36"
 - One open shelf - 36"
 - One 2-drawer pedestal under work surface
 - One lateral file - 2-drawer high, 36"
 - One task chair
 - One side chair.
3. Selection of product for test and starting time for furniture test ($t=0$). It was agreed that:
 - The test laboratory would place an order for the furniture specifying a delivery date. This is to prevent the furniture from being stored at the laboratory for excessive time waiting for chamber availability.
 - If chain of custody is required, the responsible official in the plant could attest to the date of manufacture of the furniture and that it is

- representative. If desired, by mutual agreement an independent third party could provide this service.
- The test furniture would be shipped following normal practice to the test laboratory.
 - The test furniture will be unpacked and assembled in the test chamber.
 - The test furniture will be allowed to reach equilibrium over a 24 hr period in the test chamber. The test chamber will have controlled temperature, humidity and clean air flow.
 - The emissions test will start after the initial 24 hr period is completed ($t=0$).
4. The emission rates will be reported in units of g/m^2 time.
 5. The existing data study will contain the following:
 - Emission curves will be reported on a statistical basis, mean and standard deviations, for 0, 1, 3 and 7 days.
 - Test of the ability to extrapolate emissions rate data was devised. Data sets with extended test times would be selected. The emissions over the first 7 days would be used to develop a statistical emissions rate model. This statistical model would be used to predict emission rates at 30, 60 and 180 days. The prediction will be compared to actual emissions data.
 - A simple one room model will be used to estimate room concentrations with typical sources found in an office.
 - The computer files from the mass spectroscopy (MS) analysis will be reanalyzed for detection of chemicals. The level of detection could be reported as well. The presence of these chemicals could be compared to the California proposition 65 list and data bases of known irritants, and odorants. There was interest in including reproductive hazards.
 - The existing data study plan will be detailed in a letter prepared by RTI for review by BIFMA. Once the letter has been accepted by industry, it will be sent to the appropriate corporations.
 6. The general consensus was that fabric is a low emitter and should be included as part of a component or system.

New Action Items

1. Next meeting is planned for September 24, 1997 in Grand Rapids MI. The agenda and information will be distributed later. It was suggested that a plant tour be arranged for the afternoon of September 23.
2. RTI will distribute draft minutes in paper form and post in the conference area on the Web Site within two weeks for review of attendees and comments. After a two week review period, a summary will appear on the public section and a revised version will be posted in the conference area and sent to task group members.
3. RTI will draft a plan for the existing data study and material will be sent to BIFMA for review by June 27. After review by BIFMA by July 9, the letter will

- be finalized and sent out by July 14. A target date for corporate response is July 28, 1997.
4. BIFMA (Bryan Lundgren) will write a draft process description suitable for the protocol appendix for review by next meeting.
 5. RTI will draft a test protocol by July 31, 1997, and post in the conference section on the web conference area for review by committee members.
 6. RTI will draft a "straw man" verification statement by July 31, 1997, for posting in the Web conference area and for discussion at the next meeting.
 7. RTI will work with EPA to clarify the use of confidential data in this program and provide information to members of task group by mid July.
 8. RTI will develop and coordinate a study of the sample work station approach.

Action Items Last Meeting

1. The next meeting is scheduled for June 18, 1997, in Washington DC. Completed
2. RTI will prepare the minutes of the meeting. Completed.
3. RTI and AQS will develop a study using existing test data from the office furniture industry and discussed at meeting. Completed.
4. BIFMA will work with its members to define critical components for emissions. Completed
5. BIFMA has existing categories for furniture and will provide information to those before the June meeting. Completed.
6. BIFMA will discuss with its members and then provide information on the issues surrounding the starting time ($t=0$), used for deterring decay curves. Completed.
7. BIFMA will define the components of a standard workstation. Completed.
8. RTI, AQS, and EPA will resolve questions about air changes, air flows and other issues. Recommendations were made; material will be incorporated into draft protocol in New Action Item 4.
9. RTI and AQS will develop a draft protocol before the next meeting. The preparation of the draft is now New Action Item 4.
10. RTI will develop and coordinate a study of the sample work station approach. Under development; New Action Item 8.

Linda Sheldon welcomed the attendees. In discussing the previous minutes, Bryan Lundgren said that it would be helpful to actually see comments people made about the minutes. (This can be done using the conferencing section on the Web site). He also said people did not have an opportunity to comment on the visual aids that were attached to the final version of the minutes. It was decided that the whole package including the visual aids would be sent to the meeting attendees for review. The full minutes are distributed to the mailing list and a summary posted on the Web site.

Dave Ensor gave a short overview of progress on the Indoor Air Products ETV. In addition to the Office Furniture effort, RTI is starting a similar program in the area of general air filtration. The first general stakeholder meeting is planned for June 19, 1997, a

day after the present meeting. Debbie Franke discussed the Web Site (<http://etv.rti.org>) for the program.

Linda Sheldon led discussion of a planned study using existing data to guide the writing of the test protocol. The items of general agreement are listed at the beginning of this summary.

Dave Ensor described the ETV Verification Statement. This document is signed by an EPA Laboratory Director and will have wide distribution. It is critical that the objective of the verification is defined early in the program. There was discussion of how this document may be similar to an executive summary of a test report.

The next meeting was set for September 24, 1997, in Grand Rapids MI. It was suggested that a plant tour on the afternoon of September 23 would be very helpful for the non-industry members of the task group.

Meeting Attendance

Attended

Marilyn Black,
Air Quality Sciences, Inc.

Jeff Davidson, U.S. EPA - MD

David Ensor,
Research Triangle Institute

Deborah Franke,
Research Triangle Institute

Fred Gordon, Herman Miller

Dan Hare,
Composite Panel Association

Dick Hubbard, Steelcase

Peggy Jenkins, California Air
Resources Board

Did Not Attend

Bob Axelrad, U.S. EPA

Karen Aylmer, Hon Industries Inc.

Bill Barrett ,American Seating Company

Charles Blumberg, NIH

Penny Bonda, The Hillier Group

Sharon Booker,GSA/FSS

Christina Cinalli, U.S. EPA - OPPT

Thomas Daily, GSA/FSS/FCOE

Joseph Demkin, AIA

Tom Donoghue, Global Upholstery Co.
Limited

Patrick Kennedy, U.S. EPA - OPPT

Scott Lesnet, Hon Industries Inc.

Bryan Lundgren, Haworth

Leyla McCurdy,
American Lung Association

Brad Miller, BIFMA

Deborah Prince,
Underwriters Laboratories

Jeffery Schatz,
General Services Administration

Linda Sheldon,
Research Triangle Institute

Dwight Slocum, Kimball International

Les Sparks, U.S. EPA

Chris Steele, NSF International

Laura Wekenman, Steelcase

Jim Williams, Knoll, Inc

Jianshun Zhang, CNRC

Richard Driscoll, BIFMA

Barbara Ellison, GSA/FSS

Ron Garbrecht, Trendway Corp.

David Gerke, EAC IFS

Kimberly Green-Goldborough, U.S.
EPA-ORIE

Chris Gribbs, AIA

Penelope Hansen, U.S. EPA

Randall S. Helm, Steelcase

Pauline Johnston, U.S. EPA

Hal Levin, Levin and Associates

Robert J. Mills, VIRCO MFG. Corp.

Paul Murray, Herman Miller

Fred Sisson, GSA

Michael Theiszmman, Underwriters
Laboratories

Jed Waldman, California Dept.
of Health Services

James B. Wolfe, United Chair